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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/432,498 11/02/99 RICHARDSON

J

EXAMINER

WM01/0919

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ART UNIT

PAPER NUMBER

2643

13

DATE MAILED:

09/19/01

Please find below and/or attached an Office communication concerning this application or proceeding.

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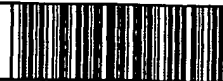
# Office Action Summary

Application No.  
09/432,498

Applicant(s)  
J.J. Richardson et al.

Examiner  
Melur. Ramakrishnaiah

Art Unit  
2643



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jul 9, 2001
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-62, 64-95, 97-105, and 107 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 19-22, 50-56, 95, and 97-103 is/are allowed.
- 6) ☒ Claim(s) 1-18, 23-49, 57-62, 64-94, 104, 105, and 107 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some\* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 20) ☐ Other:

Art Unit: 2643

*Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7, 23-24, 36, 38, 41, 43-46, 57-58, 64-68, 69-70, 72-79, 81-82 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al. (US PAT: 5,173,866, hereinafter Neumann) in view of Davis et al. (US PAT: 5,784,441, hereinafter Davis) and Vazana (US PAT: 5,850,519)

Regarding claims 1, 72, and 107, Neumann discloses a sensing device for monitoring conditions at a remote location having a originating number comprising: detecting means (501, fig. 17) for detecting conditions at the remote location, a transmitting module in (501) having a first power source (not shown), the transmitting module further comprising: reading means for reading conditions at the remote location (10, fig. 17) and transmitting means in (501) for transmitting information regarding conditions at the remote location (col. 15 lines 12-27), a base module (112", fig. 18) having a preprogrammed telephone number that correspond to a condition at the remote location, the base module further comprising: receiving means (526, fig. 18) for receiving the transmitted information to determine the preprogrammed number to call, first processing means (530, fig. 18) for selectively processing the transmitted information to

Art Unit: 2643

determine the pre-programmed number to call, conveying means (132, fig. 18) for conveying the transmitted information by using the telephone line to call the preprogrammed number determined by the first processing means (col. 15 lines 28-59), identifying means in (110, fig. 1) for identifying the remote location of the call to the pre-programmed telephone number, whereby the conditions at the remote location are monitored by the identifying means (col. 5 lines 30-55).

Neumann differs from the claimed invention in that he does not teach a base module having a list of pre-programmed telephone numbers that correspond to each of the conditions at the remote location, and the first processing means determining which pre-programmed telephone number to call; and disconnecting means for disconnecting the call to the preprogrammed telephone number after a predetermined number of rings and before receiving means has answered the call, so that the conditions at the remote location are monitored by the identifying means without call being completed.

However, Davis discloses a systems for power interruption detection which teaches a base module (fig. 1) having a list of pre-programmed telephone numbers that correspond to each of the conditions at the remote location, and the first processing means determining which pre-programmed telephone number to call (col. 3 lines 18-25) and Vazana teaches the following: disconnecting means for disconnecting the call to the preprogrammed telephone number after a predetermined number of rings and before receiving means has answered the call, so that the conditions at the remote location are monitored by the identifying means (54, fig. 2) without call being completed (fig. 2, col. 6 lines 13-19, col. 6 lines 33-42, col. 13 lines 33-43).

Art Unit: 2643

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Neumann's system to provide for a base module having a list of pre-programmed telephone numbers that correspond to each of the conditions at the remote location, and the first processing means determining which pre-programmed telephone number to call as this arrangement would enable the central unit to determine different conditions at the remote site based on the telephone number used, thus enabling the operator at the central unit to take required action as taught by Davis and disconnecting means for disconnecting the call to the preprogrammed telephone number after a predetermined number of rings and before receiving means has answered the call, so that the conditions at the remote location are monitored by the identifying means without call being completed. as arrangement would facilitate notification of information at the remote location to the user without incurring any communication cost as suggested by Vazana.

9

Regarding claims 2-7, 73-79, 81-82, Neumann further teaches the following: conditions at the remote location comprise conditions of a container at the remote location, waste disposal container (10, fig. 1), different levels of waste material in the waste disposal container, means for emptying (hauler) the waste disposal container, whereby emptying means is activated by identifying means in (110) to empty the waste disposal container, at least one person physically emptying the waste disposal container, routing at least one vehicle to the remote location to empty the waste disposal container (col. 5 lines 30-55), <sup>claim 7</sup> detecting by remote sensors using switch inputs (col. 2 lines 46-54), reading step and transmitting step occur in transmitting module in

Art Unit: 2643

(501, fig. 18), first power source (not shown) for the transmitting module , the first power source having a power level (inherent) (col. 15 lines 23-27).

Regarding claims 23-24, Neumann teaches a second power source (not shown, but it is inherent as 112" in fig. 18 needs power source) for providing power to the base module, the second power source having a power level (fig. 18).

Regarding claims 36, 38, 43-46, Neumann teaches the following: transmitting means in (501, fig. 17) comprises an encoder, the receiving means (526, fig. 18) comprises a receiver and decoder, whereby the receiver means receives transmitted information from the transmitting means and relays the information to the decoder, the decoder in (526) conveys the transmitted information to the processing means (530, fig. 18) (col. 15 lines 12-59), detecting means (500, fig. 17) comprises: remote sensor, switch inputs (inherent), switch inputs convey high and low switch information to the transferring means in (500, fig. 17), and the transferring means convey the high and low switch information to the first microprocessor (col. 15 lines 22-45).

Regarding claims 57-58, Neumann teaches the following: telephone jack (not shown in fig. 18) allowing direct connection to the telephone line of the base module (see fig. 18), detecting means (inherent) when the telephone line is off-hook (see fig. 18).

Regarding claims 64-68, Neumann does not teach the following: disconnecting means comprises a modem, predetermined number of rings is four rings, identifying means comprises a second processing means and a caller ID unit, the caller ID unit being connected to the second processing means, processing means comprises a second microprocessor.

Art Unit: 2643

However, Davis teaches the following: means for disconnecting the call to the preprogrammed telephone number after a predetermined number of rings, whereby the disconnecting means prevents the call from incurring a telephone toll charge, disconnecting means comprises a modem, predetermined number of rings is four rings, identifying means comprises a second processing means and a caller ID unit, the caller ID unit being connected to the second processing means, processing means comprises a second microprocessor (col. 3 lines 26-42).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Neumann to provide for means for disconnecting the call to the preprogrammed telephone number after a predetermined number of rings, whereby the disconnecting means prevents the call from incurring a telephone toll charge, disconnecting means comprises a modem, predetermined number of rings is four rings, identifying means comprises a second processing means and a caller ID unit, the caller ID unit being connected to the second processing means, processing means comprises a second microprocessor as this arrangement would facilitate to receive information from the remote station without incurring telephone charges as suggested by Davis.

Regarding claims 69-70, Neumann teaches the following: base module (112", fig. 18) having a reporting means for reporting conditions at a close proximity to the base module, reporting means comprises hardware inputs in the base module (figs. 17-18, col. 15 lines 22-51).

Art Unit: 2643

3. Claims 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis and Vazana as applied to claim 38 above, and further in view of Fahie et al. (US PAT: 5,960,062, filed 9-17-1997, hereinafter Fahie).

Regarding claims 39-40, the combination does not show the following: an RF receiver and decoding IC.

However, Fahie discloses an emergency telephone number alerting device which teaches an RF receiver and decoding IC (col. 5 lines 35-63).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: an RF receiver and decoding IC as this arrangement would enable the system to transmit detection signals by wireless transmission system to the processing module without being limited by the wired connection.

4. Claims 8-18, 25-32 and 83-91 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis and Vazana as applied to claims 1 and 72 above, and further in view of Hayes, Jr. (US PAT:5,726,636, hereinafter Hayes).

Regarding claims 8-18 and 83-88, the combination does not teach the following: a battery supply with a power level, conserving means for conserving the power level of the battery, activating means for periodically activating the transmitting module, slow timing circuit, slow timing circuit comprising: counter having an oscillator, a one shot circuit, counter triggering the one shot circuit when a preselected count is reached, frequency of the oscillator controlled by an RC time constant, slow oscillator, preselected count is five hours, measuring means measuring the



Art Unit: 2643

power level of the power source, reading means reads the power level of the first power source, transmitting means transmitting power level of the power source, encoding the power level of the power source, the delaying step allowing all circuitry of the transmitting module to be powered up and stable, transmitting step occurs over an RF link.

However, Hayes discloses emergency telephone with automatic low battery signaling which teaches the following: a battery supply with a power level (col. 4 lines 36-55), conserving means for conserving the power level of the battery, activating means for periodically activating the transmitting module, slow timing circuit, slow timing circuit comprising: counter (202, fig. 2) having an oscillator (210, fig. 2), a one shot circuit, counter triggering the one shot circuit when a preselected count is reached (col. 4 lines 53-62), frequency of the oscillator controlled by an RC time constant, slow oscillator, preselected count is five hours, measuring means measuring the power level of the power source, reading means reads the power level of the first power source, transmitting means transmitting power level of the power source, encoding the power level of the power source, the delaying step allowing all circuitry of the transmitting module to be powered up and stable, transmitting step occurs over an RF link (col. 4 lines 54-67, col. 5 lines 1-20, col. 7 lines 1-23).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: a battery supply with a power level, conserving means for conserving the power level of the battery, activating means for periodically activating the transmitting module, slow timing circuit, slow timing circuit

Art Unit: 2643

comprising: counter having an oscillator, a one shot circuit, counter triggering the one shot circuit when a preselected count is reached, frequency of the oscillator controlled by an RC time constant, slow oscillator, preselected count is five hours, measuring means measuring the power level of the power source, reading means reads the power level of the first power source, transmitting means transmitting power level of the power source, encoding the power level of the power source, the delaying step allowing all circuitry of the transmitting module to be powered up and stable, transmitting step occurs over an RF link as this arrangement would enable conservation of battery energy as taught by Hayes.

Regarding claims 25-31, the combination does not show the following: identifying means monitoring the power levels of the first power source and the second power source, power source comprises a transformer having a 12V dc output, internal circuitry, the regulator, a full wave bridge, a power input jack, power input jack provides power to the full bridge circuit, 5V regulator, recharging means recharging the power source.

However, Hayes teaches the following: identifying means (120, fig. 2) monitoring the power levels of the first power source and the second power source (140), power source comprises a transformer (inherent) having a 12V dc output, internal circuitry, the regulator, a full wave bridge, a power input jack, power input jack provides power to the full bridge circuit, 5V regulator, recharging means recharging the power source (col. 4 lines 35-57).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for the following: identifying means monitoring

Art Unit: 2643

the power levels of the first power source and the second power source, power source comprises a transformer having a 12V dc output, internal circuitry, the regulator, a full wave bridge, a power input jack, power input jack provides power to the full bridge circuit, 5V regulator, recharging means recharging the power source as this arrangement would promote monitoring of the battery for conserving the battery as taught by Hayes.

Regarding claim 32, Neumann does not teach list of preprogrammed numbers further correspond to the power levels of the first power source and the second power source.

However, Davis discloses a systems for power interruption detection which teaches a base module (fig. 1) having a list of pre-programmed telephone numbers that correspond to each of the conditions at the remote location, and the first processing means determining which pre-programmed telephone number to call (col. 3 lines 18-25).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Neumann modified by Hayes to provide for list of preprogrammed numbers that further correspond to the power levels of the first power source and the second power source as this arrangement would enable the central unit to monitor different conditions at the remote site by using different telephone numbers to use to indicate the conditions at the remote site as taught by Davis.

Regarding claims 89-91, Neumann teaches the following: receiving step, selectively processing step, the calling step and the conveying step all occur in the base module (112", fig. 18), receiving step further comprises the step of decoding the information received from the

Art Unit: 2643

transmitting step, providing a second power source (not shown) to the base module, the second power source comprising a power level (inherent) (col. 15 lines 22-59).

5. Claims 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis, Vazana and Hayes as applied to claim 24 above, and further in view of Allport (US PAT: 6,021,177, filed 1-26-1996).

Regarding claims 33-35, the combination does not teach base module having: at least one first indicator, at least one second indicator allowing human operators to supervise the conditions processed by the processing means , first indicator being a lamp, second indicator being light emitting diode (LED).

However, Allport discloses alarm/notification device which teaches use of light indicators and LED's (B18, figs. 3-4) to allow users to supervise the conditions processed by the processing means (figs. 9-11, col. 5 lines 45-46, lines 64-67, col. 6 lines 1-10).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for base module having: at least one first indicator, at least one second indicator allowing human operators to supervise the conditions processed by the processing means , first indicator being a lamp, second indicator being light emitting diode (LED) as this would provide visual indications of the conditions processed by the processor, so that users can make sure that things are happening according to required procedure.

Art Unit: 2643

6. Claims 47-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis and Vazana as applied to claim 46 above, and further in view of Leighton et al. (US PAT: 5,012,507, hereinafter Leighton).

Regarding claims 47-49, the combination does not teach the following: transferring means comprises: an inverter, a trigger inverter and Schmidt inverter.

However, Leighton discloses telephone activated emergency light system which teaches the following: transferring means (16, figs. 2-3) comprises: an inverter, a trigger inverter and Schmidt inverter (A1 and A10) (col. 4 lines 15-27).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for transferring means that comprises: an inverter, a trigger inverter and Schmidt inverter as this arrangement would provide one of the ways among many available ways of processing control information.

7. Claims 59-62 and 104-105 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis and Vazana as applied to claim 58 above, and further in view of Bella (US PAT: 6,144,735, filed 5-22-1998) and Sasso (US PAT: 5,490,210)

Regarding claims 59-62, and 104-105, the combination does not teach the following: half-hook detecting means comprises: a plurality of diodes being connected to the telephone lines, a plurality of discrete circuits for detecting the voltage changes, an opto-isolator IC, whereby positive voltage change telephone line is on-hook, and the negative voltage change represents that the telephone line is off-hook, diodes comprise four diodes in a full wave bridge configuration,

Art Unit: 2643

discrete circuits to detect voltage changes and relaying information to the opto-isolator IC, light emitting diodes and photo transistor receiving voltage change information from the light emitting diode and relaying voltage change information to the processing circuit.

However, Bella discloses half-hook detecting means comprises: a plurality of diodes being connected to the telephone lines, a plurality of discrete circuits for detecting the voltage changes, an opto-isolator IC, whereby positive voltage change telephone line is on-hook, and the negative voltage change represents that the telephone line is off-hook, diodes comprise four diodes in a full wave bridge configuration, discrete circuits to detect voltage changes and relaying information to the opto-isolator IC, photo transistor receiving voltage change information from the light emitting diode and relaying voltage change information to the processing circuit ( fig. 4 col. 6 lines 28-67, col. 7 lines 1-15) and Sassa teaches light emitting diodes to indicate status of various ports in the telephone interface (fig. 2 col. 5 lines 44-53).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for half-hook detecting means comprises: a plurality of diodes being connected to the telephone lines, a plurality of discrete circuits for detecting the voltage changes, an opto-isolator IC, whereby positive voltage change telephone line is on-hook, and the negative voltage change represents that the telephone line is off-hook, diodes comprise four diodes in a full wave bridge configuration, discrete circuits to detect voltage changes and relaying information to the opto-isolator IC, light emitting diodes and photo transistor receiving voltage change information from the light emitting diode and relaying voltage

Art Unit: 2643

change information to the processing circuit as this arrangement would provide one of the arrangements among many available arrangements for determining telephone hook detection and status of telephone use.

8. Claims 42 and 71 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis and Vazana as applied to claim 1 above, and further in view of Pepper (US PAT: 4,402,095).

Regarding claims 42 and 71, the combination does not teach detecting means and reporting means that comprises at least one ultrasonic ranging unit, which uses microprocessor's internal timing functions to detect the conditions at the remote location.

However, Pepper discloses ultrasonic ranging unit which is used for controlling a process (figs 9 and 10, col. 2 lines 1-22, col. 4 lines 14-22).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for detecting means and reporting means that comprises at least one ultrasonic ranging unit, which uses microprocessor's internal timing functions to detect the conditions at the remote location as this would provide another alternative detection control mechanism among many alternatives available.

9. Claims 92-94, 95, 99-103 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann in view of Davis, Vazana and Hayes as applied to claim 91 above, and further in view of Burgis (US PAT: 4,953,109).

Art Unit: 2643

Regarding claims 92-93, the combination does not teach the following: reporting conditions at a closes proximity to the base module include the conditions of a container at the close proximity to the base module.

However, Burgis discloses automated trash compactor system that teaches the following: reporting conditions at a closes proximity to the base module include the conditions of a container at the close proximity to the base module (figs. 1-2, col. 3 lines 51-58).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify the combination to provide for reporting conditions at a closes proximity to the base module include the conditions of a container at the close proximity to the base module as this would enable the local control of the trash management, thus providing an alternative to the remote management, and especially this arrangement is useful in case of communications problem with the remote site.

Regarding claim 94, the combination (Hayes) teaches reporting power level of the second source (see figs. 3A and 3B).

10. Claims 19-22, 50, 51-56, 95, 97-103 are allowed.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**



Art Unit: 2643

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (703) 305-1461. The examiner can normally be reached on Monday to Friday from 7 AM to 4 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708. The fax phone number for this Group is (703) 305-9508.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Art Unit: 2643

**or faxed to:**

(703) 308-6306, (for formal communications intended for entry)

**Or:**

(703) 305-9508 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

  
CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600